

TRANSACTIONS OF THE NEW YORK SURGICAL SOCIETY.

Stated Meeting, December 14, 1892.

The President, ARPAD G. GERSTER, M.D., in the Chair.

GROUP OF CASES OF APPENDICITIS.

Dr. CHARLES K. BRIDDON presented the following cases of appendicitis which had been recently under his care in the Presbyterian Hospital at the same time, and which illustrated different phases of the disease :

CASE I.—Nelson Lemieux, aged twelve years, was admitted to the Presbyterian Hospital on August 29, 1892. Three days previous to admission he noticed a pain in the right iliac region, which was increasing in intensity. A small tumor also appeared. On admission, temperature 102° ; pulse, 104; respiration, 34; by palpation a moderately large swelling in right iliac region was found; it was slightly painful.

Operation.—An incision about three inches in length was made over the tumor. On incising the abdominal wall an abscess cavity was opened, from which flowed about six ounces of foul-smelling pus. The cavity was cleaned and packed loosely with iodoform gauze. Antiseptic dressing. Uninterrupted recovery. Discharged cured September 27, 1892.

CASE II.—Stephen Clark, aged thirty-seven years, was admitted September 25, 1892. General health of patient good, and no history of previous attacks. One week ago patient suffered from some abdominal uneasiness; no positive pain; constipation of bowels. Continued at work, however, until two days ago, when he took to bed, with severe pain in right iliac region, vomited several times and felt feverish. Next day, condition being somewhat worse and the pain becoming more localized, he was brought to the hospital by the ambulance. On admission patient was in some shock; temperature, 98° ; just before operation temperature, 102° ; pulse, 102, soft and rapid; respiration, 34.

Operation.—Usual incision. On opening abdomen considerable pus welled up from the general cavity of the peritoneum. Appendix was found and after considerable trouble tied off and removed. All pus in the immediate neighborhood of the appendix was sponged up. No attempt was made to clean the general cavity, and the wound was hurriedly packed with iodoform gauze, as the patient's pulse ran up to 150, and his condition became very bad. He was stimulated during the night. At 8 A.M. next morning his pulse was 124; respiration, 36; bowels moved; temperature rose to 102° in afternoon, but gradually fell after that. Dressed on sixth day. Wound fairly clean. Patient recovered strength gradually. Discharged cured at end of seven weeks.

CASE III.—Thomas Manix, aged twenty-three years, was admitted October 5, 1892. Patient's previous health was good except some previous palpitation of heart. Patient an inveterate cigarette smoker. Three years ago patient awoke with some abdominal distress. His bowels moved as usual, but he began to have pain, which became gradually localized in the right side. Condition becoming worse he was brought to the hospital by the ambulance. On admission temperature 103.6°; pulse, 124; respiration, 34. Patient had vomited several times during the day. Pain pretty severe in the right iliac fossa. Pulse intermittent at about every sixth beat.

Operation.—Incision over point of greatest tenderness, extra-peritoneally some œdema of tissues found; some lymph extravasation on incising peritoneum. Appendix was found and ligated close to caput coli. The wound was packed with iodoform gauze. Uninterrupted recovery. Discharged cured at end of six weeks.

CASE IV.—Henry Beyer, aged eighteen years, was admitted November 5, 1892. Eight days ago patient awoke at 2 A.M. with sharp pain in the right side, but went to work and worked three days, then went to bed; pain more severe; constipation marked. Brought to hospital by the ambulance. On admission temperature, 103.4°; pulse, 112; respiration, 28. Taken to operating room.

Operation.—Four-inch incision was made along the outer border of the rectus muscle; the appendix was found lying to the left of a small purulent collection, from which it was separated and removed; the cavity was packed with iodoform gauze and a few stitches taken in the wound. Uninterrupted recovery.

CASE V.—David Adam, aged twenty-two, admitted November 5,

1892. Patient has had several attacks of severe abdominal pain in the right side, lasting two or three days, first attack being about a year ago. Seven days ago had pain in right side, increasing in intensity. Vomiting began next day; had two chills. During next five days patient suffered from diarrhoea. Temperature said to have risen to 105° , pulse, 106, respiration, 24.

Operation.—Incision was made five inches in length along the outer border of the rectus, some serous infiltration of transversalis fascia, no adhesions along the line of the incision, but some very frail ones found behind the rectus. On drawing abdominal wound apart, some undoubtedly sero-parulent fluid was found to flow downward from above: a small mass was found by the side of the *caput coli*, and on separating the adhesions that led to it a cavity was opened containing about half an ounce of thick, creamy pus, entirely different from that which was noted as coming from the general cavity of the peritonæum. This cavity was lined with perfectly smooth, resistant walls, and on farther examination it was found that the middle third of the appendix was united to it by what were evidently old adhesions; these were separated with some difficulty, and the appendix was ligated and removed at its junction with the gut. The wound was left entirely open, a large drain was placed over the stump, another at the upper angle of the wound, a large iodoform tampon between the two, and a voluminous top dressing of iodoform and bichloride gauze above. Regular dressings and uninterrupted recovery. At end of third week the wound edges were raised and trimmed and brought together by a few sutures; sinus packed.

CASE VI.—Occurred two days before the report, and it is doubtful if it should be included in the series, but as evidence of the fact that the diagnosis is sometimes surrounded with difficulty it is inserted here. The specimen removed would appear to warrant the conclusion that there was an error in diagnosis, and yet the history establishes the conviction that only an exploration could clear it up. Out of quite a large number of cases treated by the speaker it is the first in which section has disproved the correctness of the diagnosis.

The patient, a woman twenty-seven years old, was brought into the hospital December 8, and was reported to be suffering from appendicitis; she miscarried two years ago: a portion of the ovum had to be removed with instruments, and she was confined to her bed for three weeks; since then she has had six attacks of pain located with much precision in the neighborhood of the appendix: the present

attack began ten days before admission with sudden sharp pain, constipation, vomiting and collapse.

December 10 pain had abated somewhat, but there was considerable sensitiveness at McBurney's point, and it was thought that an obscure tumor could be felt there. The history of the case, however, led the operator to think that the trouble had originated in the pelvis after the abortion two years ago. Section was made on the 12th, and the appendix removed was found apparently healthy, but contained a few thread worms : the ascending colon was normal, nothing could be found in the gall bladder in the course of the ureter or in the pelvis, and we are at a loss to know what caused the attacks, which certainly appeared to warrant an exploration.

Case 1 was a simple abscess which had its origin in the appendix but which was effectually shut off from the general cavity ; case 2 was apparently one of diffuse suppuration but moderate in character ; in case 3 there were the usual conservative processes but no pus that could be recognized by the naked eye ; case 4 had an abscess cavity bounded by adherent omentum, appendix and intestine ; and in case 5 there had evidently been several attacks ; there was an old, thick-walled, small abscess, plus a small sero-purulent exudate that was not encysted.

Dr. JOSEPH D. BRYANT read the paper of the evening, entitled *The Relations of the Gross Anatomy of the Vermiform Appendix to Some Features of the Clinical History of Appendicitis.* See page 164.

DISCUSSION.

Dr. JOHN A. WYETH thought Dr. Bryant's interesting anatomical dissertation went to emphasize what clinical experience had taught us, namely, that one could not say before opening the abdomen for appendicitis just what he would find. There were so many directions in which the appendix might point, and so many complications arising in different cases, that one could form but a very indefinite idea of what he would find when he started to search for it. As Dr. Bryant's paper, and the series of cases of appendicitis presented by Dr. Briddon were to be discussed together, he wished to add a case illustrating a class which Dr. Briddon's series had not included, i. e., rapid gangrene and perforation of the appendix, with pouring out of liquid contents, and consequent general peritonitis developing with extreme rapidity. In such cases there was seemingly no time for

encapsulation of the inflammatory process before it had become general. Fortunately such cases were rare, but when they did occur they proceeded with lightning speed to a fatal termination; nothing could save them except an immediate operation. He had met with such a case the previous week, had operated, and his patient was then convalescent. She was twenty years of age, and had been in robust health until Friday night, when she felt a slight pain in the region of the veriform appendix. On Saturday there was no fever, no alarming symptoms, and the physician with whose family she lived, although watching her case closely, did not think it necessary to call a surgeon. On Sunday night her temperature arose, there was rather marked tenderness over the appendix, which soon became general. The doctor became alarmed and Dr. Wyeth and Dr. Weir saw her. Both made out rapidly extending peritonitis from perforation. Dr. Wyeth operated and found, as soon as he cut through the walls, the abdominal cavity full of milky pus, which welled out of the opening and emitted an offensive faecal odor. There was a general peritonitis, and it was evident that the foul pus, containing faeces, had come in contact with every portion of the peritoneum. Examination showed perforation of the veriform appendix at a gangrenous point close to its caecal origin and rapid escape of liquid faeces. There had been scarcely any attempt at encapsulation about the appendix. Plenty of iodoform gauze was introduced to protect the surrounding parts while the appendix was being lifted up, ligated and removed. A rubber drainage tube was introduced down to Douglas' pouch and the abdomen was flooded three separate times with Thiersch's solution, aided by sponging. Finally a tube was introduced, walled about by iodoform gauze, and this was washed out three hours afterward. Finding that it had already become occluded by adhesions it was withdrawn. Soon after the operation the temperature had fallen to 99°, the pulse to 110, there was no tympanitis, apparently no peritonitis; later the bowels moved twice freely, and to his surprise at this date, the eighth day, it would seem the patient was going to recover.¹

This form of appendicular disease demanded early positive diagnosis and surgical interference.

Dr. KAMMERER showed a veriform appendix which he had extirpated six months before, the history of his patient simulating an

¹ On the ninth day the fecal fistula broke into the general cavity of the peritoneum, and the patient went rapidly into collapse and died fifteen hours later.—W.

acute perforation. A healthy young woman of twenty-five years had had several attacks of appendicitis during the past months; in fact, had never fully recovered during this period. The attacks had been severe, the patient being in bed for many weeks at a time, with high fever and much pain over McBurney's point. After the last attack she had been up and about the hospital in her capacity as nurse for a few weeks, but a steady rise of temperature in the evening to about 101° and constant pain at the classical point had necessitated putting her to bed again. An operation had been strongly recommended, but was refused by the patient. Her condition remained unchanged for a week or so, when he was called to the hospital early one morning, a sudden change having taken place in the condition of the patient. She had had more pain during the night, the increase being sudden, and the temperature had gone up to 105° toward morning. When he saw her the temperature was 104.5° , her pulse 160 and very weak, and there was some tympanitis. The patient's extremities were cool and she gave the impression of one in moderate collapse. The diagnosis of acute perforation was made and laparotomy immediately done. Upon opening the abdomen nothing abnormal was found. The peritoneal covering of the intestines was everywhere pale; there was no injection, and there were no adhesions. Moderate tympanitis somewhat hindered the search for the appendix, but when the latter was found it was seen to be about four inches long, absolutely rigid and projecting into the pelvis in a straight direction. It was completely filled with faecal concretions. It was ligated at its base and cut away, and the abdominal cavity was entirely closed. The patient made an uneventful recovery, and has not had a single attack since the operation (now half a year ago) nor any rise of temperature, showing conclusively that the appendix was responsible for her condition upon operation, if not for the extreme collapse immediately preceding it. The case seemed to be another illustration of the difficulty of early diagnosis of perforation, though, no doubt, the reverse; a lack of early symptoms in undoubted perforation was more frequently the case.

DR. LEWIS S. PILCHER related a recent experience in farther illustration of the protean nature of this subject. The patient was twelve years of age, previously in apparent perfect health until seized suddenly with the symptoms of perforation of the appendix and commencing general peritonitis. Dr. Pilcher saw her a few hours later, when collapse was so marked that he deemed interference not then in place. After a

few hours' stimulation her condition had so far improved that he thought it proper to undertake laparotomy for the supposed perforative appendicitis. To his surprise the appendix was found healthy, although abundant sero-pus flowed from the peritoneal cavity, the original cause of the peritonitis giving rise to it not being apparent. The cavity was cleansed and provision made for drainage, but peritonitis progressed, and the patient died sixty hours after the operation. An autopsy was carefully made, but the original source of the infection could not be discovered. The appendix was healthy. There was no evidence of uterine, bladder, tubal or ovarian trouble : no perforation of the intestine. There were multiple foci of accumulated pus in different parts of the peritoneal cavity and general peritonitis. The symptoms had been those which usually accompany perforating appendicitis and rapidly spreading general peritonitis.

Dr. A. G. GERSTER related a case which he saw last summer of fatal gangrenous appendicitis, the patient having evidently died of septicæmia of the most virulent character. There was no tumor present and the local pain and a deep-going general intoxication were the leading features. On laparotomy, no perforation was found and the appendix was encapsulated, not free in the peritoneal cavity. There were a few drops, and only a few, of thick pus which, with the totally necrotic, but whole and imperforated appendix were encapsulated by surrounding coils of intestine and lymph exudate. While there had been strictly local pain, the fever, somnolency and dejection, dryness of the tongue, tendency to vomit and other symptoms of the severity of grave septic intoxication were marked from the beginning. The infectious and inflammatory process was found so narrowly limited, while the general peritoneum appeared perfectly healthy, that Dr. Gerster firmly hoped the patient would recover, but his hopes were not verified. The high temperature and somnolent state continued, but without symptoms of peritonitis : indeed, at no time was there a general peritonitis. The case was one of interest from the fact that there was no evidence of perforation, no escape of the contents of the appendix nor of pus into the general abdominal cavity, yet there was from the first evidence of severe septicæmia, to which the patient succumbed.

Dr. PARKER SYMS referred to a case in which during oöphorectomy the vermiform appendix came into view and, although healthy, was removed because of its great length (over five inches) lest it should cause future trouble. The point of special interest connected

with it was that after its removal it continued for about ten minutes to squirm and turn on the plate very much as a grubworm might do, and finally a formed faecal movement took place from it.

DR. WYETH inquired whether any of the members had known abscess of the liver follow appendicitis.

Dr. LANGE replied that he had seen one such case. The autopsy revealed thrombosis and a metastatic abscess of the liver. Not long ago he had operated in a pyæmic case and expected to find abscess of the liver, but was mistaken. There was sub-diaphragmatic suppuration of moderate extent and in connection with a sinus in the lumbar region, and a somewhat enlarged and fatty liver, but no suppuration in this organ. This was also verified at autopsy.

Dr. HERMAN M. BIGGS, being invited to speak, said he had found in those cases of rapidly fatal general peritonitis following perforative appendicitis that the appendix invariably had extended freely into the abdominal cavity. In such cases the autopsy had showed also that there had seldom been any considerable attempt to circumscribe the process. He believed the anatomical position of the appendix had a very important bearing upon the tendency of the disease. It was much more common clinically for the cases in which the inflammatory process did not extend to be situated behind or on the outside of the cæcum. In the larger proportion of cases the appendix extended freely inward, not behind the cæcum; but when it was in the latter position hardened fecal masses were more likely to form in the appendix, and were less readily discharged by its peristaltic movements, as the mesentery was usually shorter and the organ was less movable. Hence the *larger* proportion of cases of disease were in the appendix when it was back or outside of the cæcum, although the organ was situated here in a *small* proportion of cases. The appendix was especially liable to disease when faecal matter gained entrance to the distal end. This formed an angle with the proximal end, and a short mesentery held it in position. Such cases formed the majority of those in which ulceration took place.

In reply to the question of Dr. Wyeth, he said he had seen abscess of the liver follow ulceration of the appendix. In one of the cases of hepatic abscess which had come under his observation there had been ulceration nowhere except in the appendix. In another case of hepatic abscess there were one or two ulcers in the cæcum only.

Dr. BRYANT could recall three cases of suppuration following

appendicitis, in which the tumor had been located from the first between the lower ribs and anterior superior spinous process of the ilium of the right side. In these cases the incision for the relief of the patient was made above the crest of the ilium. It was a fair inference that in such cases the appendix extended in that direction, being located probably outside of the meso-colon. Dr. Bryant recalled another case in which severe pain extended down the cord even to the testis itself, which was markedly retracted, simulating in these respects the passage of a renal calculus. He believed these phenomena to be due, directly or indirectly, to the involvement of the genito-crural nerve by the appendicular inflammation, arising, of course, through its relations to the psoas muscle. Regarding the interesting case of Dr. Briddon, in which no evidences of disease were found, Dr. Bryant thought it probable that the pain at the seat of the appendix, which was thought by Dr. Briddon to demand operative interference, was due to the efforts of the appendix to rid itself of the parasites that were contained in it. At any rate that seemed to be a reasonable hypothesis in the light of Dr. Sym's observation of the vermiform appendix, to which he had just alluded. Dr. Bryant believed that he had, on two occasions at least, witnessed a severe attack of pain in this region due to the efforts of the appendix to rid itself of objectionable contents.

Dr. HERMAN MYNTER, of Buffalo, by invitation, said that up to three months ago it had been his good fortune not to have a fatal case of appendicitis after operation, although he had operated many times. He then met with two fatal cases in which there was gangrene and perforation and rapid general peritonitis. That condition was present which was mentioned by Dr. Biggs—the mesentery not extending to the end of the appendix causing it to bend upon itself. Neither patient had been sick over forty-eight hours before he operated; in both he found gangrene of the outer half of the appendix with perforation. Death soon followed. He had operated in two cases of appendical abscess located behind the cæcum, entering the abscess from behind. In diagnosis the condition of the pulse was of much significance when one was about to be misled by the low grade of temperature. If the temperature were 99° to 100° F. and the pulse 140 or 150, one might rest assured that in nine cases out of ten there was peritonitis from gangrene. This was particularly true if the breathing were costal, not abdominal. The pulse was of importance also when the question arose as to the necessity of operating immediately or of waiting twenty-four hours.

* CHOLELITHOTOMY.

Dr. BRIDDEN presented a woman, aged forty years, who was admitted to the hospital October 4, 1892. Her present trouble began about six weeks before her admission to the hospital with pain in the right side, particularly referred to right kidney region. She had chills, fever and vomiting for about a day. Urine high-colored and scanty. The sharp darting pains soon passed away and the patient was able to be up in about a week. There was no jaundice. She had not been well since. She was conscious of some swelling in the abdomen for the past two or three weeks, and she was kicked in the right side of the abdomen about two days ago. On admission her temperature was 100° : pulse, 88; respiration, 22. In right lumbar region can be felt an indistinct mass, somewhat larger than a fist, apparently extending into right hypochondriac region; the tumor was regarded as renal. The patient remained under observation for about ten days, and an exploratory incision was deemed advisable.

Operation.—An incision five inches long was made along the outer border of the erector spinae. The kidney was easily exposed and found to be perfectly healthy, and in front of it could be felt a solid nodular mass which was at first believed to be a carcinomatous colon, but in a few moments that viscus came into view in the wound empty and unchanged in structure. The patient was then placed supine, and an incision of five inches was made along the outer border of the rectus, commencing above at about the ninth rib. On opening the peritonæum the right lobe of the liver was found extending about two inches below the margin of the ribs; there was found no gall bladder and no fissure to represent its position. Drawing the liver well up and depressing the stomach the gastro-hepatic omentum came into view, and the index finger introduced behind its right border came in contact with a hard mass that could be palpated between the finger and thumb, but which was so fixed at a depth of about three inches as to make it impossible to draw it to the surface; the layers covering this were carefully separated until a small cavity was opened which would just admit the finger, and which gave exit to a drachm or two of mucus and contained two calculi, one as large as a marble, the other of smaller dimensions. In the absence of demonstrable evidence of the existence of a gall bladder and the existence of the mass apparently in or behind the right border of the omentum, it was concluded that this must have been a dilated common duct; after removal of the

calculi and thorough cleaning, a tampon was introduced into the cavity and the abdominal wound left open. The resulting biliary fistula required frequent dressing, and the discharge from it was profuse for several weeks. It grew gradually less in amount, until at present there is but a small wound about an inch in depth, and apparently no bile has been discharged for a couple of weeks. There remains a small wound where the tube was removed from the kidney wound. Patient enjoys excellent health, is about in the wards all day and able to assist in light work. Whether the conclusions arrived at by the operator as to the cavity being a dilated common duct may be open to question, but quite a number of cases of congenital absence of the gall bladder are on record, and there are also cases reported in which there were two common ducts in the same subject.

Dr. LANGE remarked, regarding Dr. Briddon's case, that he had himself operated upon two patients in whom the symptoms due to an affection of the gall bladder or ducts had simulated enlargement of the kidney, and in one instance he first cut down upon the kidney in the lumbar region, but finding it normal he then incised anteriorly and found stones in the dilated gall bladder. In his experience the operations during which the gall bladder was found to have been the seat of suppuration and cicatrization were among the most difficult in the domain of surgery.

Dr. GERSTER had had an opportunity last summer to observe in the same patient a floating kidney and an enlarged gall bladder. After making an incision in the lumbar region, he fixed the floating kidney by suture, then opened the abdomen anteriorly, incised the gall bladder and took out a large number of stones from the cystic duct. The woman recovered.

THYROIDECTOMY.

Dr. BRIDDON then presented a woman, aged thirty-five years, admitted to Hospital November 15, 1892, who first noticed a swelling on both sides of the neck when she was about fourteen years old, but it caused her no inconvenience until the past two months. It has been growing slowly but rather faster in the past few years, and increased more rapidly with each of her nine pregnancies. Tumor impedes respiration and deglutition somewhat. Patient is well nourished though somewhat anemic. On admission temperature, pulse and respiration were normal; venous hum quite marked over the great vessels of the neck; mitral systolic murmur.

The tumor involved principally the right side of the neck, the larger mass being somewhat quadrilateral in form, measuring about four inches in its transverse and three in its vertical diameter; this portion had two large-sized nodes in its substance; in the middle line was a smaller mass about two inches in diameter containing one node. The left lobe was slightly hypertrophied, but contained no node; the surface of the neck was marked by large superficial veins.

It was determined to remove the tumor on the right side and to leave the smaller left lobe, which was apparently healthy.

Operation.—Ether and subsequently chloroform narcosis. A long incision was made along the anterior border of the right sterno-mastoid muscle from near the mastoid process to the sterno-clavicular articulation. Division of the platysma exposed a large congerie of veins. They were not round and full, but compressed between the muscular covering and the tumor. They were flattened out into tape-like processes, anastomosing in every direction. After ligation of the main feeders the further dissection was comparatively easy. The sub-hyoid muscles were expanded into broad layers, the division of which exposed the capsule, which was treated with proper respect, and outside of this the mass was enucleated by blunt dissection. The superior thyroid was exposed and divided between two ligatures, then the isthmus, which was only slightly enlarged, was separated from the front of the trachea and similarly treated. Outside of this the separation of the main tumor from the right side of the trachea was difficult, the attachment was very intimate, a process from it wrapped round behind the trachea, which was compressed laterally so that the transverse diameter of its lumen certainly could not have been more than one-third of an inch. The tumor was then lifted out, the inferior thyroid was cleared, its relation with the recurrent nerve noted, and it was divided between two ligatures. After securing what veins had been opened, a drain was placed in the lower angle and the wound was closed with chromicized gut.

Patient reacted well. At midnight a slight secondary haemorrhage required the removal of some sutures and the ligation of a vein in the upper angle of the wound. Since that time recovery has been uninterrupted, and she is now ready to be discharged from the hospital.

The pathologist, Dr. Thacher, reported that "Microscopical examination shows ordinary thyroid tissue, except that the alveoli vary greatly in size. Diagnosis: hyperplasia of thyroid."

ULCERATING GUMMA OF THE KNEE.

DR. FRED. LANGE presented a woman, aged fifty-one years, who married at the age of twenty-five, had since borne nine living children, had had one still-born child, the first, and several miscarriages. For years she had had an ulcer of the right leg which, under treatment, would heal but break out again. When Dr. Lange first saw her, a week ago, there was a large swelling over the knee, which occupied mostly the inner and superior aspect of the knee and extended apparently into the substance of the vastus internus, presenting itself to the touch as a hard lump the size of about a fist. There was considerable effusion into the joint, which caused pain on walking. Over the top of this swelling the skin was gone to the extent of about a fifty-cent piece, and an ulcer existed with abrupt edges, from which a scanty, watery fluid exuded. The bottom of the excavation had a dark appearance, while the outer parts, overlapped by the projecting integument, were yellowish, and had the appearance of necrotic tissue. There were old scars on the leg below. The diagnosis of malignant disease was excluded, leaving that of syphilitic gumma. Under anti-syphilitic treatment the effusion and pain had largely disappeared and the tumor had decreased in size. Whether complete cure would take place without surgical interference was a question. Dr. Lange remarked that to him as a characteristic of gummatus tumor, as observed in a large number of cases, had appeared the subacute character of the affection and the progress of the process in a centripetal direction without regard to the tissue involved. The present case had probably started as a syphiloma of the muscular vastus internus. It had gradually involved the capsule of the joint and the skin, and undergone necrobiotic changes with no marked tendency for demarcation. These yellow gummatus necrotic masses will often remain undetached for many weeks, while a watery secretion takes place.

DR. GERSTER said that a number of years ago he had seen a similar case to this, in which a colleague had made the diagnosis of sarcoma of the knee, the diagnosis being fortified by microscopic examination of a portion of the involved tissue. On closer inspection of the parts just before the patient was put under ether for amputation of the limb, it was thought best to give him another week's grace and try iodide of potash. The consequence was that he was discharged cured in five weeks without operation.

HÆMORRHAGE FOLLOWING RUPTURE OF A TUBAL PREGNANCY; LAPAROTOMY; RECOVERY.

Dr. FRED. KAMMERER presented a young woman upon whom he had operated for hæmorrhage following the rupture of a tubal pregnancy. Eleven weeks before her admission to the hospital she menstruated at her regular time, but since then she had been flowing irregularly, and had had much pain in the abdomen. When she was admitted she was very anæmic: a tumor was felt, filling most of the pelvis and reaching, on the left side, up to the level of the umbilicus. In consequence of this somewhat lateral situation of the mass an incision was made at the outer border of the left rectus abdominis. After incising the peritonæum it was seen that the tumor was composed of clotted blood only. Besides, the entire abdominal cavity was filled with fluid blood sufficiently changed in color to allow of the inference that it was not a recent extravasation. After clearing out the entire mass of coagula, especially in Douglas' pouch, the left tube was found ruptured and was ligated and removed. A large mass of sterilized gauze was inserted into the cul-de-sac, its ends protruding from the lower angle of the abdominal incision for drainage. The upper angle of the wound was closed and the entire abdominal cavity remained filled with fluid blood, no irrigation being practiced. On the evening of the operation the patient was somewhat collapsed, but stimulation revived her. A steady rise of temperature began, which culminated on the evening of the day after the operation in a temperature of 106.2° , with a pulse of 136. On the following day the temperature ranged between 102° and 104° and gradually decreased until the sixth day, when it was in the neighborhood of 100° . On this day the tampons were removed for the first time, they having heretofore answered the purpose of drainage well. After this the patient made an excellent recovery. At no time after the operation were there any alarming symptoms, save those from the high temperature. There was no tympanitis and no vomiting; the large wound cavity was in the very best of condition after the removal of the tampon. In view of these conditions some difficulty presents itself in accounting for the high temperatures, which certainly placed the patient on the day after the operation in a most critical condition. The speaker thought that they could not well be explained otherwise than by absorption by the peritonæum of some of the constituents of the fluid blood. It was not improbable that the manipulations in the

abdominal cavity, in fact, the opening of the cavity itself, should have led to the formation of fibrin ferment, which we know causes aseptic fever by its absorption. Then, again, it was his custom to allow his patients no fluids after laparotomy for the first twenty-four hours, and one must bear in mind the stimulus which the absorbing power of the peritoneum receives from such treatment. Although opposed to irrigation of the general peritoneal cavity after operation in all cases of localized effusions, whether purulent or haemorrhagic and aseptic, he thought the procedure justifiable when the entire peritoneal cavity was affected. In general suppurative peritonitis he had himself seen no results from this treatment, but when the abdominal cavity was filled with aseptic fluid blood, the formation of fibrin ferment and its absorption in connection with the presence of an excellent material for the growth of germs, should such have been introduced, seemed to warrant irrigation in this particular instance.

Dr. LANGE considered it very likely in Dr. Kammerer's case that the temperature was due, as had been suggested, to blood ferment. He had had a case of the same nature in which considerable blood was left in the abdomen, but there was very little rise of temperature. Bearing on this point, he said a very interesting case had been reported by Langenbeck, that of a cystic tumor connected with a vein, accompanied by temperature elevation for a long period, and which ceased after the tumor was removed. The elevation of the temperature was attributed by Langenbeck to the entrance of blood ferment into the circulation.

Dr. KAMMERER said, in reply to an interrogatory by the President, that there was nothing in the local or general condition of his patient which pointed to septic infection, and hence his conclusion that the rise of temperature was due to the absorption of a toxic ferment.